



REMARKS

The applicant's comments are preceded by related remarks of the examiner set forth in small bold font.

4. Claim 6 is rejected under 35 U. S. C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not disclose the method in which to determine the priority of the resource and how to allocate the resource in response to an increase priority of the resource.

The applicant disagrees. One example of determining a priority and allocating the resource is given in the following passage of the specification (emphasis added):

"The parameter maxi may be assigned to a numerical value to specify a maximum Fill Level to be used greater than the value m specified when the leaky bucket was initially created. This can be used when a station 60 requests usage of a resource that would exceed the limits c, t, m of the system. For example, if the resource is important or has a high priority level, maxi may be set to a high numerical value to override the initial maximum Fill Level m. This allows an important or critical process, such as in a nuclear reactor system, to access a resource for a greater period of time to execute the process. If the process is not important, the value of m is set to logical zero (0). Accordingly, using maxi can vary the credit available for requested resource (line 21, page 10 to line 5, page 11)."

Claims 1-3, 5, 7-8, and 17-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Overby, Jr. et al. (USPN 6,016,503) (hereinafter Overby).

6. Referring to claims 1 and 17, Overby discloses a method of managing usage of a resource in a network system, the network system comprising:

indicating available credit (usage level) for usage of a resource (col. 6, lines 41-48); and regulating usage of the resource by a process based on the indicated available credit (col. 7, lines 18-32).

X Claim 1 has been amended to recite "indicating an available amount of credit for usage of a resource by a process; and regulating usage of the resource by the process as a function of the indicated available amount of credit (emphasis added)." One example of an "amount of credit" is "[t]he difference between the maximum Fill Level and a current Fill Level." (lines 4-5, page 8 of the specification) Overby does not disclose or suggest "indicating an available amount of credit for usage of a resource by a process" let alone "regulating usage of the resource by the process based on the indicated available amount of credit."

While it is true that Overby calculates an amount that is “the differential between the usage level prior to waiting and the usage level after waiting the predetermined period (block 54)” (FIG. 3 and column 6, lines 43-45), that amount is not an amount of credit. Instead, in Overby, the differential is used to calculate a predicted utilization. “If the predicted utilization is greater than a predetermined threshold value U_t (block 60), then the storage manager 30 sets the constraint flag (block 62) to indicate to the protocol stack 20 and/or applications that constrained use could potentially exhaust the available buffers 32, i.e. a potential shortage exists. The protocol stack 20 and applications 12, 14 and 16 may then ... reduce the usage of buffers and/or data flow rate to avoid the exhaustion of the buffers 32. (emphasis added)”

Thus, Overby neither discloses nor suggests a method in which the available amount of credit for usage of the resource by a process is indicated or the usage of the resource by the particular process is regulated as a function of the indicated available amount of credit.

Claims 17 and 18 are patentable for at least the same reasons as claim 1.

Claims 2 through 9 and 19 through 21 are patentable for at least the same reasons as the claims on which they depend.

19. Claims 10-16 are rejected under 35 U. S. C. 103(a) as being unpatentable over Overby in view of Harrington et al. (USPN 6,289,012)(hereinafter Harrington).

20. Referring to claim 10, Overby discloses using the software tool to regulate the usage of any of the plurality of the resources by any of the plurality of devices (col. 4, lines 37-40). Overby does not disclose creating a software tool on each of the plurality of devices accessing the plurality of resources corresponding to each of the resources. Harrington discloses creating a software tool on each of the plurality of devices accessing the plurality of resources corresponding to each of the resources (col. 12, lines 55-59). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Harrington with Overby to provide for reduced complexity of the system while allowing for the ease of future upgrades and replacements.

Claim 10 has been amended to include the “available amount of credit” language and is patentable over Overby for at least the same reasons as claim 1. Harrington does not disclose or suggest indicating “an available amount of credit” or regulating the usage “as a function of the indicated available amount of credit.”

Claims 11-16 are patentable for at least the same reasons as claim 10.

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Applicant asks that all claims be allowed. Enclosed is a \$138 check for excess claim fees and a \$110 check for the Petition for Extension of Time fee. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

1/27/3



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Version marked to show changes

1. (Amended) A method of managing usage of a resource in a network system, the method comprising:

indicating an available amount of credit for usage of a resource by a process; and
regulating usage of the resource by [a] the process [based on] as a function of the
indicated available amount of credit.

2. (Amended) The method of claim 1, wherein the resource [is] comprises memory space or system processor time.

3. (Amended) The method of claim 1, wherein the network [is] comprises an embedded computer system.

6. (Amended) The method of claim 1, further comprising:
determining [the] a priority of the resource; and
allocating the resource [in response to an increased] based on the priority of the resource.

7. (Amended) The method of claim 1, wherein [the] regulating [step] usage of the resource comprises modifying the available credit by adjusting a maximum resource usage value.

9. (Amended) The method of claim 8, wherein [the] notifying [step] the process comprises sending a message to a network address associated with the process when the requested usage amount is greater than the available credit.

10. (Amended) A method of managing a plurality of resources in a network having a plurality of devices, comprising:

for each of the plurality of resources accessed by each of the devices, creating a software tool on [each of] the [plurality of devices] device for accessing the [plurality of resources corresponding to each of the resources] resource, and using the software tool to indicate an available amount of credit for usage of the resource by the device; and

regulate the usage of any of the plurality of the resources by any of the plurality of devices as a function of the indicated available amount of credit.

12. (Amended) The method of claim 11, wherein the using step comprises:
decrementing the maximum usage level of the software tool in response to the use of the resource associated with the tool by any of the plurality of devices;
calculating [an] the available amount of credit based on the usage of the resource associated with the tool as a function of the maximum usage level; and
indicating to a device waiting to use the resource associated with the tool of the available amount of credit.

17. (Amended) Computer software, residing on a computer-readable medium at a device connected to a network, comprising instructions to cause the device to perform the following operations:
indicating an available amount of credit for usage of a resource; and
regulating usage of the resource by a process [based on] as a function of the indicated available amount of credit.

18. (Amended) A network including a plurality of devices, comprising:
a plurality of resources running in the network; and
computer software, residing on a computer readable medium at each device accessing the plurality of resources to cause the device to perform the following operations:
indicating an available amount of credit for usage of a resource; and
regulating usage of the resource by a process [based on] as a function of the indicated available amount of credit.

19. (Amended) The [method] network of claim 18, wherein the plurality of resources comprise memory space or system processor time.

20. (Amended) The [method] network of claim 18, wherein the network [is] comprises an embedded computer system.

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21. (Amended) The [method] network of claim 18, wherein the network operates in a real-time networking environment.